AMENDMENTS TO THE SPECIFICATION

Please amend page 1, lines 7-18, as follows:

A method is provided for simulating a heating of a plastic preform. A preform geometry is input into a preform design program. Oven geometry and spatial location of the preform throughout at least one oven is provided. Heating information is provided and the temperatures of the primary and secondary sources are calculated. Energy equations are solved based upon the preform geometry, the spatial location of the preform, the temperature the cooling air, and the radiation absorption spectra of the preform material. At least one cross sectional thermal profile of a final heated preform is computed.

Please amend page 6, lines 8-17 as follows:

The temperatures from the step **20** are input into the Solve Energy Equations step **18** as are Cooling Air parameters ~~(step 21)~~ step 21 and Vis/Infrared Spectra of Material parameters ~~(step 22)~~ step 22. The step **18** calculates the radiation absorption spectra to determine the energy incident upon the preform which information is input to a Compute Final Preform Temperature step **23**. To calculate the radiation absorption spectra in step **18**, the power input to the lamps and their emission spectra is used for calculating the temperature of the lamps.

Please amend page 7, lines 13-21 as follows:

The preform infrared spectra are input as absorption values for the different wavelengths in an infrared region of the electromagnetic spectrum. Also, the travel of the preform through the ovens is discretized into steps. A portion of the calculation involves determining time spent at each respective step in the oven and the exposure of the preform to each respective lamp ~~a respective step~~ (shown in Fig. 3). This indicates that regions closer to the lamp would have a greater amount of energy incident upon it.

Please amend the Abstract as follows:

A method is provided for simulating the heating of a plastic preform. A preform geometry is input into a preform design program. Oven geometry and spatial location of the preform throughout at least one oven is provided. Heating information is provided and the temperatures of the primary and secondary sources are calculated. Energy equations are solved based upon the preform geometry, the spatial location of the preform, the temperature the cooling air, and the radiation absorption spectra of the preform material. At least one cross sectional thermal profile of a final heated preform is computed.